

General Science Department, Portland State College, Oregon

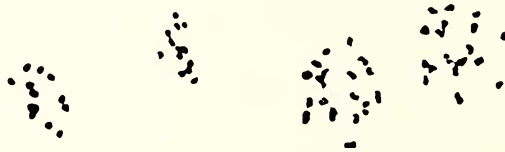
LITERATURE CITED

- HOWELL, T. J. 1896. The flora of Mt. Hood. *Mazama* 1:28-48.
 LANGE, E. F. 1953. Thomas J. Howell, pioneer Oregon botanist. *Sci. Month.* 77:199-204.
 PECK, M. E. 1961. A manual of the higher plants of Oregon. Binforde & Mort, Portland.
 WISE, W. S. 1964. The geologic history of Mt. Hood, Oregon. *Mazama* 46:13-22.

DOCUMENTED CHROMOSOME NUMBERS OF PLANTS

(See Madroño 9:257-258; 17:255. 1964.)

- Astragalus sclerocarpus* Gray. $n = 11$. Washington, Adams Co., Sand Dunes State Park. R. Spellenberg 1420, WTU.
Bomarea hirtella (HBK.) Herb. $2n = 18_{11}$. Mexico, Chiapas, Municipio of Pueblo Nuevo Solistahuacán. S. S. Tillett 636-3, D.S. Counted by Marion S. Cave. Approximately 5% of the pollen mother cells had 1 bridge with associated fragment, and 1 cell had 2 bridges and fragments, suggesting the presence of two paracentric inversions in this plant. This is apparently the first report of a tetraploid in the genus.
Cicendia quadrangularis (Lam.) Griseb. (*Microcala quadrangularis* (Lam.) Griseb.) $n = 13$. California, Contra Costa Co., Richmond, D. M. Post 125, UC; near Giant. D. M. Post 126, UC. The more familiar generic name *Microcala* is apparently invalid due to its being superfluous when published. Fig. 1 shows a microsporocyte at metaphase II of meiosis.



FIGS. 1, 2. 1, *Cicendia quadrangularis*, left; 2, *Exacum affine*, right.

- Cleomella macbrideana* Payson. $2n = 17_{11}$. Idaho, Lehmi Co., 12 mi SE of Salmon. G. A. Mulligan and C. Crompton 2961, DAO. Counted by G. A. Mulligan.
Eriocaulon compressum Lam. $n = 20$. Florida, Levy Co., near Bronson, I. L. Wiggins 19220, DS. Counted by Marion S. Cave.
Eriogonum alatum Torr. var. *alatum*. $n = 20$. Utah, Carbon Co., Tavaputs Plateau. N. H. Holmgren et al. 1961, NY, UTC; Kane Co., Kaiparowits Plateau. N. H. Holmgren et al. 2070, NY, UTC. Counted by J. L. Reveal.
E. anemophilum Greene. $n = 20$. California, Mono Co., Sonora Pass. J. L. Reveal & J. A. Reveal 491, UTC. Counted by J. L. Reveal.
E. arborescens Greene. $n = 20$. California, San Bernardino Co., Rancho Santa Ana Botanic Gardens, #1560. L. L. Kistler s.n., UTC. Cultivated. Counted by J. L. Reveal.
E. caninum (Greene) Munz. $n = 12$. California, Marin Co., Tiburon. D. L. Breedlove 4965, UTC. Counted by J. L. Reveal.
E. cinereum Benth. $n = 40$. California, Los Angeles Co., near Malibu. N. H. Holmgren & J. L. Reveal 2616, NY, UTC. Counted by J. L. Reveal.
E. compositum Dougl. ex Benth. var. *compositum*. $n = 20$. Oregon, Wasco Co., Tygh Valley. P. H. Raven 18395, UTC. Counted by J. L. Reveal.

- E. covilleanum* Eastw. $n = 17$. California, Kern Co., Temblor Range. *E. C. Twisselmann 13020*, UTC; Fresno Co., Warthan Canyon. *E. C. Twisselmann 13040*, UTC; Fresno Co., Los Gatos Canyon, *E. C. Twisselmann 13311*, UTC; San Benito Co., Clear Creek, *E. C. Twisselmann 13320* UTC; San Benito Co. near Idria. *E. C. Twisselmann 13350*, UTC. Counted by J. L. Reveal.
- E. eastwoodianum* J. T. Howell. $n = 17$. California, Fresno Co., Coalinga-Parkfield Grade. *E. C. Twisselmann 13109*, UTC. Counted by J. L. Reveal.
- E. elatum* Dougl. ex Benth. $n = 20$. Oregon, Wasco Co., near The Dalles. *N. H. Holmgren & J. L. Reveal 2116*, NY, UTC. Counted by J. L. Reveal.
- E. fasciculatum* Benth. var. *fasciculatum*. $n = 20$. California, Ventura Co., near Malibu. *N. H. Holmgren & J. L. Reveal 2117*, NY, UTC. Counted by J. L. Reveal.
- E. flexum* M. E. Jones. $n = 20$. Utah, Emery Co., near Ferron. *N. H. Holmgren & J. L. Reveal 1966*, NY, UTC; Garfield Co., near Escalante. *N. H. Holmgren et al. 2045*, NY, UTC; Garfield Co., near Boulder. *N. H. Holmgren et al. 2122*, NY, UTC. Counted by J. L. Reveal.
- E. giganteum* S. Wats. $n = 20$. California, San Bernardino Co., Rancho Santa Ana Botanic Gardens, #697. *L. L. Kistler s.n.*, UTC. Cultivated. Counted by J. L. Reveal.
- E. gossypinum* Curran. $n = 20$. California, Kern Co., near Hart Park. *E. C. Twisselmann 13307*, UTC. Counted by J. L. Reveal.
- E. gracillimum* S. Wats. $n = 20$. California, San Bernardino Co., Lucerne Valley. *N. H. Holmgren & J. L. Reveal 2594*, NY, UTC. Counted by J. L. Reveal.
- E. inflatum* T. & F. var. *deflatum* Johnst. $n = 16$. Mexico, Baja California, Angel de la Guarda Island. *R. Moran 12961*. Counted by J. L. Reveal.
- E. jamesii* Benth. in DC. var. *undulatum* (Benth. in DC.) S. Stokes ex M. E. Jones. $n = 20$. Mexico, San Luis Potosi, near San Luis Potosi. *D. B. Breedlove 15468*, UTC. Counted by J. L. Reveal.
- E. latifolium* Sm. $n = 20$. California, Marin Co., Pt. Reyes. *N. H. Holmgren & J. L. Reveal 2641*, NY, UTC; Sonoma Co., Ocean View, *N. H. Holmgren & J. L. Reveal 2648*, NY, UTC. Counted by J. L. Reveal.
- E. parishii* S. Wats. $n = 20$. Mexico, Baja California, near Rancho Marcos. *R. Moran 13478*, UTC. Counted by J. L. Reveal.
- E. racemosum* Nutt. $n = 18$. Nevada, White Pine Co., Lehman Creek, Snake Range. *D. B. Breedlove 5794*, UTC; Nye Co., Scofield Canyon, Grant Range. *N. H. Holmgren et al. 2202*, NY, UTC. Counted by J. L. Reveal.
- E. roeum* Dur. & Hilg. $n = 9$. California, Tulare Co., Sequoia N. P., *N. H. Holmgren & J. L. Reveal 2941*, NY, UTC; Kern Co., Piute Mts., *N. H. Holmgren & J. L. Reveal 2943*, NY, UTC. Counted by J. L. Reveal.
- E. salicornoides* Gandg. $n = 18$. Idaho, Owyhee Co., near Marsing. *N. H. Holmgren & J. L. Reveal 866*, NY, UTC. Counted by J. L. Reveal.
- E. saxatile* S. Wats. $n = 20$. California, Los Angeles Co., Tujung Creek. *N. H. Holmgren & J. L. Reveal 2613*, NY, UTC. Counted by J. L. Reveal.
- E. sphaerocephalum* Dougl. ex Benth. var. *sphaerocephalum*. $n = 20$. Washington, Grant Co., near Coulee City. *P. H. Raven 18493*, UTC. Counted by J. L. Reveal.
- E. temblorense* Howell & Twisselmann. $n = 17$. California, Kern Co., Temblor Range. *E. C. Twisselmann 13110*, UTC; San Luis Obispo Co., Cottonwood Pass. *E. C. Twisselmann 13104*, UTC. Counted by J. L. Reveal.
- E. thomasi* Torr. $n = 20$. Mexico, Baja California, Los Angeles Bay. *R. Moran 12423*, UTC; Angel de la Guarda Island. *R. Moran 12911*, UTC. Counted by J. L. Reveal.
- E. umbellatum* Torr. var. *umbellatum*. $n = 40$. California, Alpine Co., near Ebbets Pass. *D. B. Breedlove 5615*, UTC; near Markleeville. *D. B. Breedlove 5625*, UTC; near Monitor Pass. *D. B. Breedlove 5627*, UTC; Idaho, Boise Co., near Banks. *P. H. Raven 18521*, UTC. Counted by J. L. Reveal.

- E. vestitum* J. T. Howell. $n = 17$. California, Fresno Co., near Mercey Hot Springs. *E. C. Twisselmann* 13359, UTC; San Benito Co., near Idria. *E. C. Twisselmann* 13349, UTC. Counted by J. L. Reveal.
- Exacum affine* Balf. f. $n = 18$. Cultivated plant from Missouri Botanical Garden. *D. M. Post* 208, UC. Fig. 2 shows a microsporocyte at metaphase II of meiosis.
- Fagonia laevis* Standl. $n = 10$. Mexico, Baja California, near Cerro Blanco. *I. L. Wiggins & J. H. Thomas* 142, DS. Counted by D. M. Porter.
- Gentiana calycosa* Griseb. $n = 13$. California, Tulare Co., Mineral King. *D. M. Post* 280, UC.
- Hackelia cinerea* (Piper) Johnst. $2n = 48$, $2n = 24_{II}$. Washington, Chelan Co., near Cashmere. *R. Spellenberg* 1405, WTU.
- Holocantha emoryi* Gray. $2n = 26$. Arizona, Maricopa Co., Progeny of *D. Verity* in 1966, LA. Counted by P. H. Raven.
- Hypericum formosum* HBK. var. *scouleri* (Hook.) Coult. $2n = 8_{II}$. California, Tuolumne Co., near Pinecrest. *P. H. Raven* 20807, DS. Counted by D. W. Kyhos.
- Idahoia scapigera* (Hook.) Nels. & Macbr. $n = 8$. Washington, Kittitas Co., near Ellensburg. *R. Spellenberg* 1637, WTU.
- Orontium aquaticum* L. $n = 13$. Florida, Alachua Co., near Gainesville. *I. L. Wiggins* 19457, DS. Counted by Marion S. Cave.
- Panicum capillare* L. var. *occidentale* Rydb. $2n = 9_{II}$. Idaho, Custer Co., Sunbeam Hot Springs. *R. Spellenberg* 317, WTU; California, Shasta Co., near Castle Crags. *R. Spellenberg* 1603, WTU.
- Penstemon gairdneri* Hook. $n = 8$. Washington, Douglas Co., Moses Coulee. *R. Spellenberg* 1400, WTU.
- Schoenocaulon dubium* (Mich.) Small. $2 = 8_{II}$. Florida, Alachua Co., Gainesville. *I. L. Wiggins* 19866, DS. Counted by Marion S. Cave.
- Smilacina flexuosa* Bertol. $2n = 36$. Mexico, Chiapas, Municipio of Pueblo Nuevo Solistachuacán. *S. S. Tillett* 636-5, DS. Counted by Marion S. Cave.
- Taetes filifolia* Lag. $n = 12$. Ecuador, Quito. *C. B. Heiser* 6123, IND. Counted by R. T. Neher.
- T. micrantha* Cav. $n = 12$. Mexico, Jalisco, 70 mi N of Guadalajara. *R. T. Neher* 1272, IND.
- T. multiflora* HBK. $n = 12$. Ecuador, Prov. Pichincha, near Pifo. *C. B. Heiser* 5099, IND. Counted by R. T. Neher.
- T. subulata* Cerv. $2n = 24$. Mexico, Durango, 90 mi W of Durango. *R. T. Neher* 1262, IND.
- T. terniflora* HBK. $2n = 48$. Peru, Cuzco. *C. B. Heiser* 6241, IND. Counted by R. T. Neher.
- Tribulus cistoides* L. $n = 6$. Jamaica, St. Catherine, near Caymanas Park. *D. M. Porter* 1024, DS, GH, IJ; St. Andrew, St. Benedict's School. *D. M. Porter* 1037, DS, GH, IJ; Columbia, Atlantica, Barranquilla. *D. M. Porter* 1117, COL, DS, GH; Mexico, Colima, near Tecoman. *D. M. Porter* 1483, GH, MEXU.

NOTES AND NEWS

XI INTERNATIONAL BOTANICAL CONGRESS—The XI International Botanical Congress will meet in Seattle, at the University of Washington from August 24 to September 2, 1969. Meetings of the Nomenclature Section will be held on August 21-24. Papers and symposia will be given in nine sections: molecular, metabolic, structural, developmental, genetical and cytogenetical, environmental and evolutionary, systematic, ethnobotany, and historical botany. Pre- and post-Congress scientific field trips are planned. The first circular has already been issued and may be obtained from Dr. Richard S. Cowan, Secretary, XI International Botanical Congress, Smithsonian Institution, Washington, D.C. 20560.